

2005 IAP



Fort Bragg

Installation Action Plan



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2005 IAP

Fort Bragg

North Carolina



Statement of Purpose

The purpose of the Installation Action Plan (IAP) is to outline the total multi-year Installation Restoration Program for an installation. The plan will identify environmental cleanup requirements at each site or area of concern, and propose a comprehensive, installation-wide approach, with associated costs and schedules, to conduct investigations and necessary remedial actions.

The IRP is specifically focused at contamination resulting from past activities, and is funded by the centrally-managed Environmental Restoration, Army (ER,A) budget account. Cleanup activities directed at contamination primarily resulting from current operations are separately funded and managed, and, although mentioned where relevant, will not generally be discussed in detail in an IAP.

In order to facilitate successful program coordination between the IRP manager, U.S. Army Environmental Center (USAEC), executing agencies, regulatory agencies, and the public, Fort Bragg generates an annual IAP. The IAP is used to track requirements, schedules and budgets for the Fort Bragg restoration program.

All site-specific funding and schedule information has been prepared based upon current program requirements and is, therefore, subject to change. Current project funding projections indicate that all cleanup actions will be implemented or completed at Fort Bragg by the end of 2007.

The following agencies contributed to the formulation and completion of this 2005 Installation Action Plan for Fort Bragg in a planning workshop held on 5 May, 2004:

Engineering & Environment, Inc.

Fort Bragg, Environmental Branch

U.S. Army Corps of Engineers, Savannah

U.S. Army Environmental Center

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Acronyms & Abbreviations

AAFES	Army/Air Force Exchange Service
ACSIM	Assistant Chief of Staff for Installation Management
AEDB-R	Army Environmental Database - Restoration
AMMO	Ammunition
AOC	Area of Concern
ASP	Ammunition Supply Point
AST	Aboveground Storage Tank
BGS	Below Ground Surface
BMP	Base Master Plan
BRAC	Base Realignment and Closure
CESAS	U.S. Army Corps of Engineers, Savannah
CMI	Corrective Measure Investigation
CMS	Corrective Measure Study
COSCOM	1st Army Corps Support Command
CTC	Cost to complete
CTT	Closed Transferred and Transferring
cy	cubic yards
DA	Department of the Army
DD	Decision Document
DEH	Directorate of Engineering and Housing
DERA	Defense Environmental Restoration Account (currently named ER,A)
ENRD	Environmental and Natural Resources Division
EOD	Explosive Ordnance Division
EPA	United States Environmental Protection Agency
ER,A	Environmental Restoration, Army (formerly called DERA)
FS	Feasibility Study
FTBR	AEDB-R Database Code for Fort Bragg
FY	Fiscal Year
GIS	Geographic Information System
IAP	Installation Action Plan
IMA	Installation Management Agency
IRA	Interim Remedial Action
IRP	Installation Restoration Program
LTM	Long Term Monitoring
LUC	Land Use Controls
NCDENR	North Carolina Department of Environment and Natural Resources
NFA	No Further Action
NOV	Notice of Violation
NPDES	National Pollution Discharge Elimination System
NPL	National Priorities List
NRC	United States Nuclear Regulatory Commission

MMRP	Military Munitions Response Program
O&M	Operations and Maintenance
OMA	Operations and Maintenance Account
OU	Operable Unit
OWS	Oil/Water Separator
PA	Preliminary Assessment
PAFB	Pope Air Force Base
PCB	Polychlorinated Biphenyls
PCE	Perchloroethylene
POL	Petroleum, Oil and Lubricants
POM	Program Objective Memorandum
PWBC	Public Works Business Center
PY	Prior Year
RA	Remedial Action
RA(C)	Remedial Action - Construction
RAB	Restoration Advisory Board
RACER	Remedial Action Cost Engineering and Requirements
RC	Response Complete
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
REM	Removal
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
RI	Remedial Investigation
RIP	Remedy in place
ROD	Record of Decision
RRSE	Relative Risk Site Evaluation
S&A	Supervision and Administration
S&R	Supervision and Review
SAAF	Simmons Army Air Field
SCM	Site Conceptual Model
SI	Site Inspection
SVOC	Semi-Volatile Organic Compounds
SWMU	Solid Waste Management Unit
TCE	Trichloroethylene
TPH	Total Petroleum Hydrocarbons
USACE	United States Army Corps of Engineers
USAEC	United States Army Environmental Center
USGS	United States Geological Survey
UST	Underground Storage Tank
VOC	Volatile Organic Compounds
VTTA	Vocational Technical Training Area
WTP	Water Treatment Plant
WWTP	Wastewater Treatment Plant

Summary

STATUS:	Fort Bragg is not an NPL installation. No known off-post contamination has been detected.	
TOTAL # OF AEDB-R SITES:	44	
ACTIVE ER/A SITES:	11 (7 are RIP with LTM)	
RESPONSE COMPLETE SITES:	33	
DIFFERENT SITE TYPES:	3 Disposal Pit/Dry Wells 12 Landfills 2 Oil Water Separators 2 Storage Areas 1 Contaminated Soil After Tank Removal 1 Spill Site Area 3 Above Ground Storage Tanks 3 Explosive Ordnance Disposal Area	2 Sewage Effluent Settling Ponds 1 Maintenance Yard 1 Washrack 2 Surface Impoundment/ Lagoons 6 Sewage Treatment Plants 5 Underground Storage Tanks
CONTAMINANTS OF CONCERN:	Petroleum/Oil/Lubricants (POL), Solvents, Polychlorinated biphenyls (PCBs), Metals, Pesticides, Explosives	
MEDIA OF CONCERN:	Soil, Sediment, Groundwater, Surface Water	
COMPLETED REM/IRA/RA:	Removal of contaminated soil at FTBR-102 Removal of contaminated soil at FTBR-063 Removal of Oil/Water Separator at FTBR-035 Removal of Contaminated Soil at FTBR-036	
CURRENT IRP PHASES:	RI/FS at 3 sites CMS/RD at 2 sites RA at 5 sites LTM at 8 sites	
PROJECTED IRP PHASES:	RA at 1 site LTM at 11 sites	
IDENTIFIED POSSIBLE REM/IRA/RA:	Methane Venting at FTBR-009 Remove contaminated soil at FTBR-035 Chemical oxidation at FTBR-103	
DURATION:	Year of IRP Inception: 1980 Year of IRP Completion Excluding LTM: 2007 Year of IRP Completion Including LTM: 2014	

Installation Information

SITE DESCRIPTION:

Fort Bragg is located on ~200,000 acres in south-central North Carolina ~50 miles south of Raleigh. The facility is part of Cumberland, Hoke, Harnett, and Moore Counties, and abuts the cities of Fayetteville and Spring Lake.

COMMAND ORGANIZATION:

IMA (Installation Management Agency) under the Assistant Chief of Staff for Installation Management (ACSIM)

Installation: XVIII Airborne Corps and Fort Bragg, PWBC, ENRD

IRP EXECUTING AGENCIES:

U.S. Army Corps of Engineers, Savannah District

REGULATORY PARTICIPATION:

State: North Carolina Department of Environment and Natural Resources (NC DENR)

REGULATORY STATUS:

- Non-NPL
- RCRA Part B Permit No. NC8210020121 (Storage Facility)
- Air Quality Permit No. 4379R7 (Incinerators and Heating Plants)
- NPDES Permit No. NC0003964 (Water and Wastewater Treatment Plants)
- Solid Waste Permit No. 26-02 (Sanitary Landfill 11)
- Solid Waste Permit No. 26-C (Demolition Landfill 12)
- NRC Materials License (Womack Army Hospital)
- Various NRC Licenses (Storage and Use of Radioactive Materials other than at Womack Army Hospital)
- Fort Bragg has not received an NOV or enforcement action at any IRP sites
- Various UST permits

MAJOR CHANGES TO IAP FROM PREVIOUS YEAR (2004):

- NFA for FTBR-016 was received in FY03.
- NFA for FTBR-035 was received in FY03 (OMA funding).

Installation Information

LOCATION:

Approximately 11,000 acres (17 square miles) of Fort Bragg comprise the cantonment area, which is located in the eastern part of the installation, and includes approximately 5,168 buildings. Almost all military maintenance and commercial facilities, supply facilities, operation and training facilities, various community facilities, and family and troop housing areas are located in this cantonment area. Fort Bragg currently supports a combined military and civilian population of about 65,000. The bulk of the installation's acreage is dedicated to operational areas for field maneuvers, exercises, firing ranges, impact areas, and parachute drop zones.

HISTORY & MISSION:

Fort Bragg is an active U.S. Army installation serving as the major logistic, training, and mobilization deployment center for the XVIII Airborne Corps and the 82nd Airborne Division, which is part of the Army's mobile infantry, assault and armored forces. Fort Bragg's primary mission is the training of airborne troops. Broadly categorized, ongoing operations at Fort Bragg include general maintenance and repair, land management, utility systems operation and commercial activities.

Fort Bragg, originally known as Camp Bragg, was established as a temporary Field Artillery Cantonment on August 21, 1918 on land that was leased with an option to purchase. The design of the initial cantonment area was based on the requirements of two artillery brigades with a total troop strength of around 6,000.

The Army designated Camp Bragg as a permanent facility in 1921. In 1922, the Field Artillery Board was transferred from Fort Sill, Oklahoma, and Camp Bragg was redesignated Fort Bragg with its primary mission being the training of troops in the use of artillery.

Additional land was purchased in 1926 and the area of Fort Bragg increased from approximately 51,000 to 121,000 acres. From 1927 to 1939, permanent construction on the post occurred that increased the size of the cantonment area. In 1941, additional land was purchased and the wastewater treatment plant was constructed.

From 1941 to 1946, Fort Bragg was heavily involved with the training of artillery and airborne troops for World War II and troop strength reached over 100,000 during this period. From 1946 to 1951, the 82d Airborne Division was the only large unit at Fort Bragg. During this postwar period, most of Fort Bragg was not in use.

In 1951, the Army established Fort Bragg as the Air Support Headquarters and the XVIII Airborne Corps was activated. Fort Bragg became known as "Home of the Airborne" and its primary mission became training airborne troops.

The Psychological Warfare Center, established in 1952, was later redesignated the Special Warfare Center and renamed the John F. Kennedy Warfare Center in 1965. Additional purchases of land increased the installation to its present size of approximately 200,000 acres. In 1973, Fort Bragg was assigned to Headquarters, U.S. Army Forces Command, Fort McPherson, Georgia.

Camp Mackall, located in Richmond and Scotland Counties and approximately ten miles west of the southwestern corner of Fort Bragg, was purchased in 1943, and developed on approximately 6,600 acres as an airborne troop training post. Three, 5,000-foot runways, a hospital, a wastewater treatment plant, a water treatment plant, and 1,963 temporary buildings were constructed. Camp Mackall was deactivated in 1946, and most of the structures were demolished. Camp Mackall has been used as a Special Operations training area since approximately 1952. There are 25 Closed Transferred and Transferring (CTT) ranges requiring investigation under the MMRP.

Contamination Assessment

OVERVIEW

Fort Bragg's diversified activities such as vehicle maintenance and repair, land management, utility operations, and commercial processes resulted in a variety of wastes being generated at the installation over time. These wastes consist primarily of the following:

Petroleum Products
Solvents
Anti-Freeze
Metals

Waste Acids
Paint Products
PCBs
Construction/Demolition Debris

Pesticides/Herbicides
Medical Wastes
Radiological Wastes

A RCRA Facility Assessment (RFA) was conducted at Fort Bragg and Camp Mackall in 1988. Forty-six (46) solid waste management units (SWMUs) and seven (7) areas of concern (AOCs) were identified as having the potential for release of contaminants to the environment. As a consequence of the 1988 RFA report, thirty-one (31) SWMUs and seven (7) AOCs were listed in Part I of the RCRA Part B Permit as requiring RCRA Facility Investigation (RFI) studies to characterize these sites for the nature, amount, and extent of contamination. In accordance with the RCRA Part B Permit, Fort Bragg identified and evaluated an additional site at the Vocational Technical Training Area, FTBR-102 and Mallonee Village Gas Station, FTBR-103, and the Abandoned Ammunition Supply Point, FTBR-104. No SWMUs or AOCs were identified at Camp Mackall or Overhills. However, there are 25 identified CTT ranges requiring investigation at Camp Mackall.

Currently there are 11 active sites (five being investigated and six sites with remedy-in-place under IRP) with 33 Response Complete sites. The AOC-A site will be addressed using non-ER,A funds.

Fort Bragg has no known off-post contamination. Groundwater under Fort Bragg has been shown to be contaminated with solvents, POL, metals and pesticides primarily at FTBR-069 and 103. This groundwater is not currently used as a drinking water source for Fort Bragg.

There are 11 landfills identified in the IRP. The contents of the abandoned landfills are believed to be solid waste, incinerator ash, and/or construction debris. The landfills' typical operation activities included the trench and area methods of landfilling. In the trench method, soil is excavated to create a trench, the wastes are compacted into the trench, and the excavated soil is used to cover the waste. The maximum depths of disposal trenches were usually 15 feet below land surface.

Contamination Assessment

OPERABLE UNITS

The sites listed in this Installation Action Plan are divided into ten Operable Units (OU) and five independent sites (FTBR- 003, 004, 005 103, and 104). The sites included in each Operable Unit are defined below.

OPERABLE UNIT 1

OU 1 is comprised of FTBR-007, FTBR-030, FTBR-031, and FTBR-B. They are located near the 82nd Airborne Division heating plant. OU1 received closure in January 1999.

OPERABLE UNIT 2

OU 2 consists of FTBR-012 and FTBR-102. These units are placed in the same OU because of their proximity. A RCRA Facility Investigation (RFI) was completed at this OU in 1996. The RI/FS (RFI) report was submitted to the federal and state regulators in 1996 and approved in 1997. NFA for SWMU 102 was received 9/14/01. RA completed in FY04 (fencing and signs). Groundwater and surface water LTM is underway.

OPERABLE UNIT 3

OU 3 consists of FTBR-014, 008, and 009. FTBR-014 consists of former FTBR-002 since it overlies part of FTBR-002 which is near Beaver Creek. FTBR-008 and FTBR-009 are included because of their close proximity to each other and to Beaver Creek. The RFI for OU 3 was submitted to regulatory agencies in 1996. CMS/RD was completed. RA to begin in FY04.

OPERABLE UNIT 4

OU 4 consists of FTBR-063, 069, E, F, and G. These sites are in the north central portion of the cantonment area. The Final RI/FS (RFI) report for OU 4 was submitted to regulatory agencies in June 1999. An IRA of soil removal, at FTBR-063, was completed in FY00. A Supplemental RFI at FTBR-063 began in FY03. An Extended RI/FS at FTBR-069 began in FY00. The CMS was completed in March 2004. LTM is recommended.

OPERABLE UNIT 5

OU 5 consists of FTBR-001 and FTBR-077. FTBR-001 is an abandoned landfill encompassing approximately 94 acres. FTBR-077 is the 782nd Battery Shop Neutralization Sump. The Final RI/FS (RFI) report was submitted in late FY99. NFA for FTBR-077 was received in FY01. LTM is underway.

OPERABLE UNIT 6

OU 6 is comprised of FTBR-016, 086, 088, C, and D. They are located in the eastern part of the cantonment area. RFI report for FTBR016, 068, 088 was submitted in FY01. Extended RFI in progress by USACE for 86 & 88. SWMU 16 received NFA in April 2003. Monitoring wells at SWMU 16 will be abandoned

OPERABLE UNIT 7

OU 7 consists of ten sites at the current wastewater treatment plant (WWTP). These include FTBR-038 through 040, 042 through 046, 050, and A. If needed, future actions will be handled under OMA.

OPERABLE UNIT 8

OU 8 consisted of 170 used oil USTs located throughout the cantonment area (FTBR-033). This OU is considered NFA under the IRP, any future action will be addressed under the UST Program. NFA was received for 47 sites.

Contamination Assessment

OPERABLE UNITS, continued

OPERABLE UNIT 9

OU 9 is FTBR-35, which consists of 235 oil/water separators (OWS) located throughout the cantonment area. One of the OWS (Building A-2058) is not in use, and an IRA was completed. A NFA was received in FY01. A NFA for Building 2-3357 was received in February 2003 (OMA funding). A NFA was received for Building 1-1147 in 2002 (OMA funding).

OPERABLE UNIT 10

OU 10 is FTBR-036, 74 washracks located throughout the cantonment area. A RFI is underway at washrack for A-2058 by USACE. An IRA was completed. A NFA was received in July 2002.

INDEPENDENT SITES

FTBR-003

Comprised of an abandoned landfill. The Final RFI report was approved in July 1996. NCDENR and EPA had concurred with NFA. Wells to be abandoned.

FTBR-004

Comprised of an abandoned landfill at FTBR-004 and fire training pits at SWMU-018. A CMS is complete. LTM is recommended.

FTBR-005

Comprised of an abandoned landfill. The LTM Work Plan was completed. LTM is expected to begin in FY05.

FTBR-103

Comprised of former Mallonee Village Gas Station. An Extended RFI is underway.

FTBR-104

Comprised of an abandoned Ammunition Supply Point.

Contamination Assessment

PREVIOUS STUDIES

Title	Date	Author
RCRA Facility Investigation. Operable Unit #2	8/31/94	Fort Bragg, North Carolina Volumes I-V
Fort Bragg Work Plan Amendments for SWMUs 8D and 102	10/18/94	
RCRA Facility Investigation, Operable Unit 3	2/2/95	
Comments to the CAMP for FY95	2/15/95	
Proposal to Conduct Site Recon and PA of 525th MI Barracks	3/2/95	
Corrective Action Management Plan	3/20/95	
Draft RFA for Proposed 525th Military Intelligence Brigade	4/18/95	Barracks, Construction Project Site
Draft RFA for Proposed 525th Military Intelligence Brigade	6/1/95	Barracks, Construction Project Site (Revised)
RCRA Facility Investigation, Operable Unit 2 (Final)	6/20/95	
US Geological Survey Progress Report	7/3/95	RFI April-June 1995
Request for Extension for IM Workplan for SWMU 102	7/17/95	
Review of Soil and Groundwater Sampling Results Collected From OU2	7/24/95	
Interim Corrective Measures Plan, OU #2, SWMU 102	7/24/95	USGS
Responses to State comments for 525th Military Intelligence	7/26/95	NCDENR
RCRA Facility Investigation, Operable Unit #4	8/1/95	USGS
Draft Interim Corrective Measures Plan for SWMU 102	8/15/95	(OU 2) Sumps A and B Comments
Comments to draft RFI report for OU 3	8/16/95	Fort Bragg, North Carolina (faxed copy rec'd 8/15/95)
Agenda for August 29, 1995 Meeting between USGS,	8/28/95	NC DEHNR, EPA and Fort Bragg
Interim Corrective Measures Workplan Responses	9/12/95	SWMU 102, Fort Bragg, NC
Interim Corrective Measures Workplan Responses	9/12/95	SWMU 102, Fort Bragg, NC
Schedule of USGS reports submitted to EPA and NCDEHNR	9/15/95	
Analyses and detection limit comparisons	9/15/95	
Request for Extension to September 14, 1995 for submittal of	9/18/95	Final Corrective Measure Plan, OU 2, SWMU 102
Interim Corrective Measures Plan for Operable Unit #2	9/18/95	Final Report
Revised Draft RCRA Facility Investigation Report, June 1995 OU2	9/27/95	USGS
Laboratory Data for the ICMP	9/29/95	
USGS Progress Report, RFI July -- September 1995	10/2/95	USGS
USGS Progress Report, RFI July -- September 1995	10/3/95	USGS
USGS, Baseline Risk Assessment for 525th	10/3/95	Military Intelligence Brigade Barracks
Request for Approval for Fort Bragg to remove wells at SWMU-12	10/4/95	Fort Bragg
Maps/figures and additional information re: replacement of monitoring wells Fort Bragg	10/12/95	USGS
Request for assistance in bringing the IRP program to closure	10/19/95	Fort Bragg
Review of Baseline Risk Assessment for 525th MI Brigade	11/1/95	Barracks Construction Site (proposed)
Memorandum of minutes of the August 29, 1995 meeting for OU3 meeting	11/1/95	Scribe
Response to comments, Revised Draft RFT OU #2	11/9/95	June 1995, Fort Bragg, NC
Geohydrologic Study: Investigation of Groundwater	11/13/95	Contamination at AAFES and VTTA
Letter summarizing the proposed reporting limits changes for Fort Bragg	12/5/95	
FY96 IRP Program Projection	12/22/95	

Contamination Assessment

PREVIOUS STUDIES, continued

Title	Date	Author
Memorandum: Scoping Meeting for 525th Military Intelligence	1/16/1996	Barracks Construction Site
Detailed Program Update for the Proposed 525th MI Barracks, UST Information	1/29/1996	
Scoping Memorandum/Feb 13, 1996 meeting to discuss HEA for OU2, SWMUs 102 and 12	2/15/1996	
SSE forms for SWMUs 12 and 102	3/8/1996	
Memorandum from J. Williams: Minutes from February 13, 1996	3/21/1996	Fort Bragg
RCRA Facility Investigation, Operable Unit 2	4/15/1996	Final Administrative Report
Workplan for additional sampling at OU3	4/18/1996	
"Mystery Analytical Data" dated 12/15/95	4/22/1996	
CERFA Letter Report for Recreation Center #2	4/22/1996	
US Army Base Realignment Closure 95 Program	4/22/1996	Environmental Baseline Survey Report, Rec Ctr #2
Sump Soil Excavation SWMU 102	5/2/1996	
Interim Corrective Measures Plan for SWMU 102 (OU2)	5/2/1996	Sumps A and B
Groundwater Sampling Low-Producing Wells--Fort Bragg	5/3/1996	Installation Restoration Program (IRP), North Carolina
Pre- and post-grading soil elevation comparisons for SWMU	5/13/1996	102, OU #2
Letter confirming the additional sampling to occur at SWMU 5	5/14/1996	Mtg between USGS and DEHNR
Proposed Scope of Work, Recreation Center #2	5/15/1996	
Draft RCRA Facility Investigation Report for OU4: SWMUs 63, 69, and AOCs E, F, and G	5/24/1996	
Analytical Data, ICMP OU2, SWMU 102	5/29/1996	Removal of Pb- and TPH-contaminated soil
USGS discussions with Fort Bragg, EPA and NCDEHNR	6/19/1996	Minutes from the June 12, 1996 meeting
Draft Corrective Action Management Plan	6/20/1996	
US Geological Survey Responses to USEPA comments to RFI Report SWMUs 4 and 18	7/10/1996	USGS
Interim Corrective Measures, Operable Unit 2, SWMU 102	7/12/1996	
Draft USGS letter summarizing work required to close out SWMU 3	7/19/1996	USGS
Scope of Work for Comprehensive Site Assessment, Rec Center (BRAC)	7/24/1996	USACE
Final RCRA Facility Investigation Report and letter report	8/12/1996	addendum for SWMU 3
Transmittal of Documents Promised from the June 20, 1996	8/13/1996	meeting w/attachments (chklist & GIS overlay)
Information re: wells at Young's Lake (maps, Subsurface)	8/13/1996	Investigation and sampling data for monitor wells)
Fax memorandum: SWMU 12, Young's lake landfill	8/14/1996	
Solid Waste Management Unit 5, Final Report and Letter Rpt	8/28/1996	Addendum with analytical data
Progress Report for Recreation Center #2, Fayetteville, NC	9/3/1996	Comprehensive Site Assessment
Draft Agenda, September 17, 1996 Meeting at NC State Offices	9/6/1996	
Detailed Program Update on the 525th Military Intelligence	9/16/1996	Brigade Barracks Construction Project
Draft Work Plans for the Comprehensive Site Assessment (CSA) Recreation Center #2, Fayetteville, NC	9/17/1996	
Request for Deadline Extension, Final Fort Bragg RFI Report OU3, Granted by EPA	9/17/1996	

Contamination Assessment

PREVIOUS STUDIES, continued

Title	Date	Author
Memo: Abandoned Construction Debris Landfill, SWMU 12	9/24/96	
Solid Waste Management Unit 3 -- Fort Bragg, Concurrence w/USGS recommendation for NFA for SWMU 3	9/27/96	
Meeting Notes, September 17 -- 18, 1996 w/ NCDEHNR, USGS, Fort Bragg Environmental Staff	9/30/96	
Final RCRA Facility Investigation Report with letter report addendum for SWMU 5, Fort Bragg, NC	9/30/96	
Corrective Action Management Plan (CAMP) FY 1996	9/30/96	
Meeting Notes, September 17 -- 18, 1996, Fort Bragg IRP meeting with DEHNR and EPA in Raleigh	10/3/96	
RCRA Part B Permit Questions	10/23/96	
Solid Waste Management Units 4 & 18	10/31/96	
Final BRAC Cleanup Plan Abstract and Draft Final Environment Baseline Survey Report, Recreation Center #2	10/31/96	
Minutes from the October 18, 1996 meeting with Zapata, US COE Savannah, and Fort Bragg (BRAC)	11/4/96	
Fiscal Year 1997 Corrective Action Management Plan	11/8/96	
Verbal request for time extension for Final RFI for OU # 3	11/18/96	
Fort Bragg Recreation Center #2, Field Trip #1, Preliminary Soil Boring Locations	11/27/96	
Request for Deadline Extension -- Final Fort Bragg RFI Report, OU #3	11/25/96	
Notification of intent to construct at SWMU 18	12/4/96	
Meeting Notes, December 11, 1996 Fort Bragg/EPA/DEHNR/USGS	12/17/96	
RCRA Facility Investigation at Operable Unit 3, Fort Bragg	12/18/96	
Memorandum: SWMU 14 soil piles	1/3/97	
Preliminary Data from the BRAC CSA of the Recreation Ctr #2	1/15/97	
Fort Bragg RFI, SWMU 5, Surface Soil Risk Calculations	1/18/97	
Proposed changes for the analysis of Oil and Grease in environmental samples collected for the Fort Bragg RFI prog.	1/22/97	
Proposed changes for the analysis of oil and grease in environmental samples collected as part of the RFI	1/23/97	
Meeting Notes, January 15, 1997, Meeting w/Zapata, CESAS, NCDEHNR, and Fort Bragg DPWE	1/24/97	
Memorandum: Construction of Storage Building at Landfill 18 (SWMU 18)	1/28/97	
USGS letter regarding the proposed changes to the RFI rept appendices (in reference to the OU 3 Final RFI report)	1/28/97	
Workplan for additional sample collection at SWMUs 4 & 18	1/28/97	
US Army Base Realignment and Closure 95 Program Environmental Baseline Survey Report, Rec Ctr #2	1/29/97	
RCRA Facility Investigation Final Report -- Operable Unit 2 from US EPA	2/11/97	
Work Plan, OU 5, Fort Bragg IRP Proposed Work Plan for OU 5	2/15/97	
Letter concurring with the recommended changes to the RFI appendices in USGS letter dated January 27, 1997	2/21/97	
Work Plan for Additional Sampling at SWMUs 4 & 18 EPA letter w/attach: reservations about gw sampling methods	2/24/97	

Contamination Assessment

PREVIOUS STUDIES, continued

Title	Date	Author
Responses to DEHNR review comments on the Draft RCRA Facility Investigation Report for OU 4	3/14/97	
Fort Bragg IRP, Draft Workplan for Operable Unit 4	3/14/97	
Work Plan for Additional Work at OU 5 (SWMUs 1 & 77)	3/17/97	Letter from US EPA
Fort Bragg IRP, Draft Workplan, Operable Unit 6	3/17/97	
Addendum to OU 5 Work Plan	4/7/97	
Waste vs. Used Oil (Memorandum from Joanne Williams)	4/11/97	
Fort Bragg Response to NCDEHNR Comments on SWMU 5 Soil Risk Calculations	4/14/97	
Work Plan for Additional Work OU4 (SWMUs 63, 69, and AOCs E, F, & G) Responses to Comments on OU4 RFI (R. Pope-USEPA)	4/15/97	
Work Plan for Additional Work at OU5 (SWMUs 1 & 77) from Rob Pope, US EPA	4/15/97	
Meeting Notes, March 26, 1997	4/17/97	
Corrective Action Plan, Faith Barracks Energy Plant, Fort Bragg, North Carolina US ACE Savannah Document	4/29/97	
Fayetteville Recreation Center #2, April Meeting Minutes	4/29/97	
Responses to NC DEHNR Human Health and Ecological Risk Assessment for Operable Unit #3	5/19/97	
Addendum to Draft Work Plan for Operable Unit #4	5/19/97	
Results of the application of seismic-reflection and electro magnetic techniques for near-surface hydrogeologic... invest	6/20/97	
Quarterly Meeting Action Item: Project Management Tool	8/15/97	
Restoration Advisory Board Information for the USO/Rec Center #2 in Fayetteville, NC	9/16/97	
Fort Bragg RFI -- Investigation-Derived Waste	9/26/97	
Missing Lab Data to complete review of PRE for SWMUs 4 & 18 on loan from USGS	10/30/97	
Fiscal Year 1998, Corrective Action Management Plan Via Fax	10/31/97	
Fiscal Year 1998 Corrective Management Plan Fort Bragg (hard copy)	11/3/97	
Fiscal Year 1998 RCRA CAMP from Rob Pope of EPA Region IV	12/18/97	
Response to Comments OU-3 Human Health and Environmental Assessment	2/25/98	
Zapata Engineering's Review Actions to NCDENR's 9/97 comments re: Draft CSA of the Recreation Center #2	3/31/98	
Draft Agenda for the Tier I Partnering Meeting on May 27 & 28, 1998 in Raleigh, NC: Host: USGS	4/17/98	
Letter report for groundwater confirmation samples collected at the 525th Military Intelligence Brigade Barracks Site	4/24/98	
Replacement page 3 to Letter report for groundwater confirmation samples collected at 525th Military Intelligence Bcks	4/27/98	
Minutes from the Fort Bragg Partnering Meeting March 25, 1998 at Fort Bragg (by consultant, Anita Cree)	5/4/98	
Agenda for the May 27, 1998 Partnering Meeting for Fort Bragg at USGS Office in Raleigh	5/5/98	
Minutes from the Fort Bragg Partnering Meeting March 25, 1998 at Fort Bragg (fax from consultant, Anita Cree)	5/7/98	

Contamination Assessment

PREVIOUS STUDIES, continued

Title	Date	Author
Request/Notification of Intent to construct a 3-story bldg at the location of SWMU 4	5/11/1998	
Final Fiscal Year 1998 Corrective Action Management Plan	5/14/1998	
Letter Report of Groundwater Samples Collected at SWMUs 2 & 14 (OU #3)	6/1/1998	
Draft agenda for the July 22-23, 1998 Fort Bragg Partnering Team (Virginia Beach, VA)	6/15/1998	
Approved Partnering Meeting Minutes for Fort Bragg, March 25 1998 meeting (Fort Bragg, NC)	6/15/1998	
Draft minutes, Partnering Meeting, May 27, 1998, Fort Bragg, (USGS Office, Raleigh, NC)	6/15/1998	
Hotel Information re: July 1998 Fort Bragg Partnering Mtg Virginia Beach, VA	6/15/1998	
Schedule for the RCRA Corrective Action Management Plan for Fiscal Year 1998	6/29/1998	
Record of Communication: From Lebeed Kady to File Room re: Ft. Bragg's request to construct on SWMU 4	6/30/1998	
Memorandum from Hazardous Waste Section re: SWMU 5 and SWMU 4 from Kathleen Z. Lawson	7/14/1998	
Responses to DENR comments on the draft CSA Report Recreation Center #2, Fayetteville, NC	7/28/1998	
Work Plan for Corrective Measures Study (CMS) and Remedial Design for Operable Unit (OU) #2, SWMUs 12 & 102	8/7/1998	
Agenda for Partnering Meeting August 12 - 13, 1998, at Virginia Beach, VA	8/7/1998	
Request NFA for SWMU 77 and AOC E and F	11/4/1998	
Request to remove OU7, OU8, OU9, OU10 from IRP	12/4/1998	
Response to comments on CMS/RD Workplan for OU2, SWMUs 8, 9, 2, and 14, Abandoned Landfills	#####	
RFI at SWMUs 4 and 18 - Final Report. Comments requested for RFI extension	#####	
AOC E&F Closure Report	1/20/1999	
Clarification on CMS/RD Workplan Comment Responses for OU2, SWMU 102 and SWMU 12	1/25/1999	SAIC
AOC G - UST Closure Report - Request NFA	1/27/1999	Earth Tech - Warren Air Conditioning
Preliminary Organic Analysis for SWMU 63 & 69	1/27/1999	USGS
CAMP Fiscal Year 1999	1/27/1999	
Fax - Contours of TCE contamination, area east of SWMUs 4 and 18 (RFI extension)	2/1/1999	EPA
Final CMS/RD Workplan, SWMU12 and 102, OU2, Addendum Sampling and Analysis Plan, Site Safety and Health Plan	2/8/1999	SAIC Engineering
CMS/RD for OU3 - SWMUs 8, 9, 2, 14 Workplan, SSHP, Addendum Sampling and Analysis Plan	2/18/1999	SAIC

Contamination Assessment

PREVIOUS STUDIES, continued

Title	Date	Author
Final CSA for Rec Center #2	3/24/1999	
EPA comments on OU3 CMS/RD workplan	4/6/1999	EPA
Draft Final SAP for 525th MIB	4/27/1999	COE
Field Investigative Report for CMS/RD OU2 (SWMUs 12 and 102)	4/30/1999	COE
Final RFI OU4	5/4/1999	USGS
Revised Summary of Proposed Work, Extended RFI, SWMUs 4 & 18	5/5/1999	COE
Historical information regarding SWMU 77 site - Construction record and maps	5/5/1999	
CMS/RD for OU3 - Response to comments	5/18/1999	SAIC Engineering
Information regarding the operation of OU7, OU9, OU10	6/16/1999	
Draft Final RFI OU6 Workplan	6/16/1999	USCHPPM
OU2 Response to Comments - Field Investigation Report, CMS/RD	7/28/1999	COE
Confirmation Sampling 525th MIB - Final Report	7/30/1999	COE
Summary of SOW for SWMUs 4 & 18 for Extended RFI	8/9/1999	COE
Additional information concerning OWS and washracks (OU9 and OU10) in support of NFA request	8/11/1999	
RFI Final Report, OU5	8/24/1999	USGS
RCRA Facility Investigation at Operable Unit 5, Final Report	8/24/1999	USGS
SWMU 63 post excavation sampling results	9/7/1999	
Rec Center #2 - Report on Field Investigation and Sampling by the City of Fayetteville and CP&L	9/15/1999	
OU3 Final Workplan and Addenda	9/28/1999	SAIC Engineering
Draft SAP and SSHP Methane Survey SWMU 12 and SWMU 8a	11/9/1999	SAIC Engineering
SWMU 63 post excavation sampling results (additional excavation) for concurrence to backfill excavation	1/24/2000	
SWMU 63 Workplan for soil excavation and "Closure Report" (Excavation results)	1/31/2000	COE
Additional information concerning OWS and washracks (OU9 and OU10) in support of NFA request	2/24/2000	
Draft SAP for Extended RFI - SWMUs 4 and 18	2/28/2000	SAIC
Additional information (OWS survey) concerning SWMU 88 and OU6 Workplan	3/1/2000	
Errata pages to Addendum #2, SAP for Methane Survey, CMS/RD, SWMU 12, SWMU 8a, SWMU 9	3/9/2000	COE
Draft Sampling and Analysis Plan for Extended RFI at SWMU's 4 & 18		COE
Field Investigative Report for CMS/RD OU3 (SWMUs 8, 9, 2 & 14)	3/29/2000	SAIC Engineering
Revised pages for the SAP for Extended RFI-SWMU's 4 and 18: Final Plan	5/12/2000	SAIC
Received a copy of 9/2/99 letter from UST Section, Fayetteville Regional Office, indicated NFA for OU4: AOC E.	6/15/2000	Ft. Bragg
RFI Work Plan for OU6	6/19/2000	USACHPPM
Interim Measures Report for SWMU 102 (Resubmitted)	8/3/2000	Ft. Bragg
SWMU 69 Well Re-Sampling Work Plan	9/13/2000	COE
Addendum #2 Sampling and Analysis Plan and Site Safety and Health Plan for the Additional Methane and Groundwater Sampling at OU3	9/28/2000	SAIC Engineering

Contamination Assessment

PREVIOUS STUDIES, continued

Title	Date	Author
Draft Field Investigation Report for the Phase I RFI at Mallonee Village, SWMU 103	10/12/2000	SAIC
Report of Environmental Services and Removal of Oil/Water Separator at Building 2-3357	10/12/2000	Ft. Bragg
Final Field Investigation Report for the Phase I RFI at Mallonee Village Gas Station, SWMU 103	11/1/2000	SAIC
Draft Workplan Addendum for Former Building A-2058 Oil/Water Separator Removal	11/21/2000	Horne Engineering Services
Draft LUCAP transmitted by e-mail for review	1/19/2001	Ft. Bragg
Supplemental Groundwater Monitoring Well Sampling Report for SWMU 69	1/18/2001	USACE
Final Addendum #2 Sampling and Analysis Plan and Site Safety and Health Plan for the Additional Methane and Groundwater Sampling for the CMS/RD at OU3	2/1/2001	SAIC
Draft Addendum to the S&A Plan for the Extended RFI at SWMU's 4 & 18 and Mallonee Village Gas Station (SWMU 103)	2/13/2001	SAIC
Draft Addendum #3 S&A Plan and Site Safety and Health Plan for the Additional Methane Survey and Groundwater Sampling for the CMS/RD for OU2: SWMUs 12 and 102	2/15/2001	SAIC
Draft Workplans for the Supplemental RCRA Facility Investigation and Corrective Measures Study at SWMU 1	4/30/2001	Zapata Engineering
Draft Work Plans for the Supplemental RCRA Facility Investigation and Corrective Measures Study at SWMU 63	4/30/2001	Zapata Engineering
Baseline Risk Assessment for Administrative Closure of Range 70	4/2/2001	URS
Final Letter Report, A-2058 Oil/Water Separator Removal	5/23/2001	Horne Engineering Services
Draft Field Investigation Letter Report for the Additional Methane Survey and GW Sampling for the CMS and RD for OU2: SWMUs 12 and 102	6/1/2001	SAIC
Draft Field Investigation Letter Report for the Additional Methane Survey and GW Sampling for the CMS and RD for OU3: SWMUs 8, 9, and 2 & 14	6/1/2001	SAIC
Work Plan for Supplemental RFI Investigation at SWMU 69	7/11/2001	USACE
Draft Letter Report for the Supplemental RFI and CMS at SWMU 63	8/27/2001	Zapata
Draft Letter Report for the Supplemental RFI and CMS at SWMU 1	8/27/2001	Zapata
Final CMS for Abandoned Landfill, SWMU 12	3/14/2002	SAIC
Draft CMS for OU3: SWMU 8,9, and 14	3/15/2002	SAIC
Draft CMS for OU3: SWMUs 8, 9, and 14 and Draft Appendix A - SCM for CMS at OU3: SWMUs 8, 9, and 14	3/15/2002	SAIC
Draft Work Plan for Supplemental RFI Investigation at OU6	4/3/2002	COE, Savannah
Draft Site Conceptual Model for Supplemental RFI at SWMU 69	4/3/2002	USACE
Revised Final CMS for Abandoned Landfill, SWMU 12, Within OU2	6/7/2002	SAIC
Draft Remedial Design Analysis for SWMU 12: 3 Volumes	6/21/2002	SAIC
Final Sampling and Analysis Plan for Boundary Delineation of PCB-Contaminated Soil at SWMU 8	7/15/2002	SAIC
Site Conceptual Model Report for the Supplemental RFI Investigation of SWMU 69	9/25/2002	COE
Addendum to the Workplan for the Supplemental RFI for SWMU 69	9/25/2002	COE
Draft Supplemental RFI and CMS for SWMU 63	11/18/2002	Zapata
Draft Supplemental RFI and CMS for SWMU 1	11/18/2002	Zapata

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PREVIOUS STUDIES, continued

Title	Date	Author
Final Letter Report, Supplemental Soil Sampling for Oil/Water Separator Removal at 2-3357	1/15/2003	USACE
Draft Report of Supplemental RFI at OU6	11/19/2002 & 03/12/2003	USACE
Final Supplemental RFI/CMS at SWMU 5	3/27/2003	SAIC
Final Corrective Measures Studies at OU3, Volumes 1 through 4	4/2/2003	SAIC
Final Supplemental RFI/CMS at SWMU 1	4/16/2003	Zapata
Draft Preliminary Data Summary Report for the Field Investigation for the Extended RFI for the Former Mallonee Village Gas Station (SWMU 103)	5/7/2003	SAIC
Final Remedial Design Analysis for Abandoned Landfill, SWMU 12, Volumes 1, 2, and 4	5/13/2003	SAIC
Final Work Plan, Long Term Ground Water Monitoring at SWMU 1	6/20/2003	USACE
Final CMS for OU3, Volumes 2 through 4	7/2/2003	SAIC
Final Remedial Design Analysis for Abandoned Landfill, SWMU 8	7/2/2003	SAIC
Final Remedial Design Analysis for Abandoned Landfill, SWMU 9	7/2/2003	SAIC
Final Remedial Design Analysis for Abandoned Landfill, SWMU 14	7/2/2003	SAIC
Final Preliminary Data Summary Report for the Extended RFI for SWMU 103	7/11/2003	SAIC
Draft Addendum #5 to the Sampling and Analysis Plan for the Extended RFI at SWMU 103	7/11/2003	SAIC
Revised Final Supplemental RFI/CMS for Abandoned Landfill, SWMU 5	7/11/2003	SAIC
Letter Report for Underground Solvent Tank Investigation at Buildings 2-2809 and 2-2412 (In conjunction with SWMU 69 Investigation)	8/27/2003	COE
Final Addendum #5 to the Sampling and Analysis Plan for the Extended RCRA Facility Investigation at Mallonee Village Gas Station (SWMU 103)	9/2/2003	SAIC
Final Construction Workplan for Remedial Action at SWMU 12	9/9/2003	
Draft Site Safety and Health Plan for Remedial Action at SWMU 12	9/11/2003	
Site Conceptual Model Report for the Supplemental RFI of SWMU 69, Revised August 2003, Volumes I and II	9/11/2003	USACE
Report on the First Sampling Event for Long Term Groundwater Monitoring at SWMU 1	10/2/2003	USACE-Savannah
Revised Final Construction Workplan for Remedial Action for SWMU 12	11/19/2003	
Revised Pages for the Revised Final Construction Workplan for	12/12/2003	
Final Supplemental RFI and CMS at SWMU 63	1/20/2004	Zapata
Draft Preliminary Data Summary Report for the Field Investigation for the Extended RFI (September 2003) for the Former Mallonee Village Gas Station (SWMU 103)	2/11/2004	SAIC
Final Corrective Measures Study for SWMUs 4 & 18	3/11/2004	SAIC
Revised pages for the Final Supplemental RFI and CMS at SWMU 63	3/12/2004	Zapata

2005 IAP

Fort Bragg
Active
Site Descriptions

ABANDONED LANDFILL 1 (OU5)

FTBR-001

SITE DESCRIPTION

FTBR-001 is an abandoned, solid waste landfill, located on the south side of Gruber Road near the intersection of Gruber Road and Merrill Street in the cantonment area. The landfill is bordered on the east by a north-south drainage ditch and on the south by an intermittent north-west-southeast tributary to Big Branch Creek. The 94-acre, unlined landfill operated from the early 1940s to 1951. Three vehicle maintenance facilities including motor pools, and paved parking lots were constructed on top of most of the site.

Because of an erosion control project in Big Branch Creek near the site, the EPA and the State agreed that surface water/stream bed sediment samples would not be required.

Early stages of the RFI revealed metals, pesticides, and volatile organic compounds in the soil, and low levels of solvents were found in the groundwater. The Final RFI was submitted late FY99. The CMS, completed in FY03, recommended LTM for groundwater only. LTM is underway.

STATUS

RRSE RATING: High

CONTAMINANTS: Metals,
Petroleum Hydrocarbons, VOCs,
SVOCs

MEDIA OF CONCERN:
Groundwater

COMPLETED IRP PHASE:
PA/SI, RI, CMS

CURRENT IRP PHASE: LTM

FUTURE IRP PHASE: RC (2003)
with LTM

PROPOSED PLAN

Institutional controls, DD and GIS layers in Base Master Plan (BMP) will be implemented and LTM for groundwater every nine months.

FTBR-001 continues next page

ABANDONED LANDFILL 4 & FIRE PITS 18

FTBR-004

SITE DESCRIPTION

This site consists of an abandoned landfill and fire training pits (formerly FTBR-018). The abandoned landfill is located southeast of the intersection of Honeycutt Road and Knox Street in the central part of the cantonment area. The 10-acre landfill was active between 1961 and 1966. No known records exist to indicate the types of waste that were disposed there.

Two fire-training pits were constructed on the northern half of FTBR-004. Use of the fire pits began in 1966, and the pits were lined with sand, until 1978, when they were lined with concrete and drainage was directed to an oil/water separator located between the pits.

A RFI report was submitted in 1998. Elevated levels of some contaminants indicated the need for additional sampling. The wells were sampled in FY01-02, and indicated that metals, VOCs, SVOCs and petroleum hydrocarbons were above NC groundwater standards.

The CMS was completed in March FY04.

STATUS

RRSE RATING: High

CONTAMINANTS: Solvents, Petroleum Hydrocarbons, Lead

MEDIA OF CONCERN:
Groundwater

COMPLETED IRP PHASE:
PA/SI, RI, CMS

CURRENT IRP PHASE: LTM

FUTURE IRP PHASE: RC (2004)
with LTM

PROPOSED PLAN

Land-use and institutional controls (Base Master Plan - BMP) will be implemented and LTM for groundwater. LTM to occur every nine months.

FTBR-004 continues next page

ABANDONED LANDFILL 5

FTBR-005

SITE DESCRIPTION

FTBR-005 is an abandoned, solid waste landfill, in the vicinity of Knox and Honeycutt Rd., east of the Earth Terminal Complex. It covers ~seven acres in the central portion of the cantonment area. The unlined landfill was active between 1966 and 1967.

Results of sampling and analysis indicate the presence of contaminants of concern indicated in the Status Box that exceed North Carolina groundwater standards.

The CMS, completed in FY03, recommended LTM for groundwater.

PROPOSED PLAN

Institutional controls, DD and GIS layers in BMP will be implemented and LTM for groundwater every nine months.

STATUS

RRSE RATING: High

CONTAMINANTS: Petroleum
Hydrocarbons, VOCs

MEDIA OF CONCERN:
Groundwater

COMPLETED IRP PHASE:
PA/SI, RI, CMS

CURRENT IRP PHASE: LTM

FUTURE IRP PHASE: RC
(2003) with LTM

FTBR-005 continues next page

ABANDONED LANDFILL 8 (OU3)

FTBR-008

SITE DESCRIPTION

FTBR-008 consists of four, solid waste landfills (8a, 8b, 8c, and 8d - totaling 50 acres) located near the intersection of Knox and Kedenburg Streets in the southern portion of the cantonment area. These unlined landfills were reportedly active between 1967 and 1970 for sludge, debris and unknown waste.

Previous inspections at FTBR-008 revealed the presence of leachate in Beaver Creek and exposed debris at several eroded locations at Landfills 8b and 8c. Chemical analysis during the RI/FS (RFI) revealed PCBs, petroleum hydrocarbons, VOCs, and SVOCs in soil. Groundwater constituents included VOCs, SVOCs, petroleum hydrocarbons, pesticides and metals. The final RI report was approved in 1996.

The FS (CMS/RD) was started in FY98. Sampling found low levels of methane at multiple locations. The CMS/RD were completed in FY03 and determined that soil exposure concerns would be addressed by limiting site access. Fencing and signs were funded in FY04 to limit site access and implement land use controls.

STATUS

RRSE RATING: High

CONTAMINANTS: VOCs, SVOCs, Pesticides, Metals, Petroleum Hydrocarbons, PCBs

MEDIA OF CONCERN:

Groundwater, Surface Water, Sediment

COMPLETED IRP PHASE: PA/SI, RI/FS (CMS/RD)

CURRENT IRP PHASE: RA(C)
(Funded)

FUTURE IRP PHASE: RC (2004)
with LTM

PROPOSED PLAN

LTM for groundwater and land use controls and institutional controls (fencing and signs and inclusion in the BMP) will be required. The O&M plan will be funded with non-ER,A funds.

FTBR-008 continues next page

ABANDONED LANDFILL 9 (OU3)

FTBR-009

SITE DESCRIPTION

FTBR-009 is an abandoned, construction, demolition debris and municipal solid waste landfill. It is located on ~30 acres of wetlands southeast of the intersection of Honeycutt Road and All American Freeway in the south central portion of the cantonment area, and was active between 1970 and 1975. It is bounded on the north by a railroad yard, on the east and the south by tributaries to Beaver Creek, and Honeycutt Road to the west. The All American Freeway runs through the western third of the landfill.

Chemical analysis of soil and groundwater samples collected during the RI indicated several chemicals of concern above NC 2L regulatory levels: VOCs, petroleum hydrocarbons and metals. Trace levels of explosives were detected in the groundwater.

Sampling found high levels of methane in multiple locations. The CMS/RD were completed in FY03 and determined that soil exposure concerns would be addressed by limiting site access. Fencing, signs and the passive methane venting system were funded in FY04.

STATUS

RRSE RATING: High

CONTAMINANTS: Methane, Petroleum Hydrocarbons, VOCs, Metals, Explosives

MEDIA OF CONCERN: Soil, Groundwater

COMPLETED IRP PHASE: PA/SI, RI, CMS, RD

CURRENT IRP PHASE: RA(C) (Funded), LTM

FUTURE IRP PHASE: RC (2004) with LTM

PROPOSED PLAN

LTM every nine months for groundwater and methane as well as land use controls and institutional controls (fencing and signs and inclusion in the BMP) will be required. The O&M plan will be funded with non-ER,A funds.

FTBR-009 continues next page

ABANDONED LANDFILL 12 (OU2)

FTBR-012

SITE DESCRIPTION

FTBR-012 is an abandoned, construction and demolition debris landfill located north of Butner Road in the northeast corner of the cantonment area. The unlined landfill was active from 1975 to 1985.

The RI (RFI) showed the landfill size to be ~9 acres. The site is bounded on the north and the west by Young Lake, on the south by the former Vocational Technical Training Area (VTTA, FTBR-102), and on the east by a stream and power line right-of-way.

The RFI identified semi-volatile organic compounds, pesticides, metals, and petroleum hydrocarbons as constituents in soil, groundwater, and stream bed sediment samples.

The CMS was completed in April 2002, recommending fencing and LTM. The RA (fencing and signs) was completed in FY04. LTM for groundwater constituents exceeding the NC 2L standards is underway.

STATUS

RRSE RATING: High

CONTAMINANTS: SVOCs, Metals, Petroleum Hydrocarbons

MEDIA OF CONCERN: Soil, Groundwater, Surface Water

COMPLETED IRP PHASE: PA/SI, RI, CMS, RD, RA(C)

CURRENT IRP PHASE: RC (2004) with LTM

FUTURE IRP PHASE: RC (2004) with LTM

PROPOSED PLAN

LTM every nine months for groundwater and surface water monitoring as well as land use controls (fencing and signs will be installed in FY05 and inclusion in the BMP) will be required. The O&M plan will be funded with non-ER,A funds.

FTBR-012 continues next page

ABANDONED LANDFILLS 2 & 14 (OU3)

FTBR-014

SITE DESCRIPTION

Former FTBR-002 (59 acres) and FTBR-014 (3 acres) are located west of the intersection of Cook Drive and Knox Street near the south border of the cantonment area. The RFA identified two landfills at this site. However, the RFI revealed no evidence of a landfill at the location of Abandoned Landfill 2. Demolition Landfill 14 was operated from 1985 to 1986. Because FTBR-002 was incorporated into FTBR-014, FTBR-002 was deleted from AEDB-R.

The State of North Carolina and EPA approved a no further action option for Abandoned Landfill 2 (6/28/96). Proposed Highway 13 will cross the southern portion of the landfill.

Chemical analysis of FTBR-14 identified low levels of petroleum hydrocarbons and dieldrin in the soil, and low levels of PCE and metals in the groundwater. High levels of methane were detected in the soil at Landfill 14. The CMS/RD was completed in FY03. Partial RA(C) was funded in FY04 (methane alarms in buildings as well as building warning signs).

PROPOSED PLAN

Fencing and additional signs will be installed. LTM for groundwater and methane monitoring as well as land use controls and institutional controls (fencing and signs and inclusion in the BMP). The O&M plan will be funded with non-ER,A funds.

FTBR-014 continues next page

STATUS

RRSE RATING: High

CONTAMINANTS: Methane, Pesticides, Metals, Petroleum Hydrocarbons, VOCs

MEDIA OF CONCERN: Soil, Groundwater

COMPLETED IRP PHASE: PA/SI, RI, CMS, RD

CURRENT IRP PHASE: RA(C)

FUTURE IRP PHASE: RA(C), LTM

DEH STORAGE COMPOUND (OU4)

FTBR-063

SITE DESCRIPTION

FTBR-063 is the site of the former RCRA hazardous waste storage shed that was used between 1977 and 1982. It was located in the PWBC compound northwest of the intersection of Butner Road and Reilly Street. Stored wastes included PCB wastes, acids, caustics, solvents, paint wastes, used oil, photographic wastes, and insecticides. The unit was closed in 1982 because it was replaced with a RCRA-compliant generator storage area.

Chemical analysis of soil and groundwater samples collected during the RFI identified pesticides, volatile organic compounds and metals. The pesticides and VOCs were detected above regulatory levels. An IRA of soil removal was completed in FY00. The removal reduced the contamination levels in soil to below NC regulatory levels.

The CMS was completed in March 2004 and recommended LTM for groundwater for pesticides and VOCs which exceeded NC 2L standards.

STATUS

RRSE RATING: High

CONTAMINANTS: VOCs,
Pesticides

MEDIA OF CONCERN:
Groundwater

COMPLETED IRP PHASE: PA/SI,
IRA, RI/FS (CMS)

CURRENT IRP PHASE: LTM

FUTURE IRP PHASE: RC (2004)
with LTM

PROPOSED PLAN

LTM to occur every nine months is recommended. FY05 sampling will include a full suite of sampling for the first LTM phase to determine baseline.

FTBR-063 continues next page

JEEP DISMANTLING AREA, BLDG 8-3612 (OU4)

FTBR-069

SITE DESCRIPTION

FTBR-069 is located southeast of the intersection of Woodruff Street and Knox Street. This mostly unpaved, four acre area has been used to dismantle Army vehicles and store impounded vehicles. Currently, the area is used to store large Army vehicles.

Chemical analysis of soil and groundwater samples collected during the RFI identified volatile and semi-volatile organic compounds, pesticides, PCBs, metals, and petroleum hydrocarbons. TCE exceeds the state regulatory limits in groundwater.

The Phase I RFI was started in FY96. The extended RI/FS was started in late FY00 and is in progress to further investigate the soil and groundwater contamination. The source of the TCE has not been determined. Low levels of TCE above NC 2L standards have been detected over 1,000ft downgradient from the original Jeep Dismantling Yard.

STATUS

RRSE RATING: High

CONTAMINANTS: VOCs, SVOCs, Pesticides, Metals, Petroleum Hydrocarbons, PCBs

MEDIA OF CONCERN: Soil, Groundwater

COMPLETED IRP PHASE: PA/SI

CURRENT IRP PHASE: RI/FS

FUTURE IRP PHASE: RI/FS, LTM

PROPOSED PLAN

An extended RI/FS is in progress to enhance the site conceptual model as well as to further determine the source area. It is expected that no soil remediation will be necessary. LTM will be required.

FTBR-069 continues next page

MALLONEE VILLAGE GAS STATION

FTBR-103

SITE DESCRIPTION

This site is located west of South Lucus St, and bordered on the north by Honeycutt Rd. It was formerly occupied by a commercial vehicle maintenance facility and gas station, that was operated since the 1940s. The area is greater than six acres. A solvent tank was abandoned in place in the 1940s. This tank was rediscovered and removed in the late 1990s along with ~300cy of contaminated soil.

The RFI was started in Feb 2000. High levels of chlorinated solvents and gasoline constituents were detected in the sediment, surface water and groundwater. A plume of contaminated groundwater extends under family housing and a Ft Bragg elementary school. The plume is not stable.

The preliminary Site Conceptual Model (SCM) was developed in FY02. The extended RI/FS is underway.

STATUS

RRSE RATING: High

CONTAMINANTS: Solvents, POL, Metals

MEDIA OF CONCERN: Soil, Groundwater, Surface Water

COMPLETED IRP PHASE: PA/SI

CURRENT IRP PHASE: RI/FS (Funded)

FUTURE IRP PHASE: CMS/RD, RA, LTM

PROPOSED PLAN

The RI/FS and CMS/RD will be completed to delineate the contamination. Groundwater remediation and monitoring will be needed.

FTBR-103 continues next page

ABANDONED ASP

FTBR-104

SITE DESCRIPTION

This is an abandoned Ammunition Supply Point that was demolished after World War II. The site is ~12 acres. The ammo was stored in open earthen berms that were bulldozed during demolition. It is unknown what type of ammunition was stored, however white phosphorus grenades were discovered during a U.S. Army Corps of Engineers construction project at the site in 2003.

A hazardous waste removal action was funded with OMA funds to remove the soils and contamination from the white phosphorus. Removal of the white phosphorus is scheduled for FY04.

PROPOSED PLAN

RI/FS to begin in FY04.

FTBR-104 continues next page

STATUS

RRSE RATING: High

CONTAMINANTS: Explosives, VOCs, SVOCs, White Phosphorus

MEDIA OF CONCERN: Soil, Groundwater, Surface Water

COMPLETED IRP PHASE: None

CURRENT IRP PHASE: None

FUTURE IRP PHASE: RI/FS, RA(C), LTM

2005 IAP

Fort Bragg
MMRP
Site Descriptions

MMRP Sites

CTMKL-001-R-01	Anti-Aircraft Towed Target Range
CTMKL-002-R-01	Anti-Tank Range
CTMKL-003-R-01	Drop Zone Site #1
CTMKL-004-R-01	Drop Zone Site #2
CTMKL-005-R-01	Field Target Ranges Area
CTMKL-006-R-01	Former Permanent Sawmill
CTMKL-007-R-01	Fortified Mockup Combat Area
CTMKL-008-R-01	Glider Landing Field
CTMKL-009-R-01	Known Distance Range
CTMKL-010-R-01	Landscape Range
CTMKL-011-R-01	Live Grenade Court Site
CTMKL-012-R-01	Machine Gun Range #1
CTMKL-013-R-01	Machine Gun Range #2
CTMKL-014-R-01	Manuever Areas
CTMKL-015-R-01	Miniature Anti-Aircraft Range
CTMKL-016-R-01	Mortar Range #1
CTMKL-017-R-01	Mortar Range #2
CTMKL-018-R-01	Moving Target Range
CTMKL-019-R-01	Nazi Village Combat Area
CTMKL-020-R-01	Pistol Range
CTMKL-021-R-01	Submachine Gun Range
CTMKL-022-R-01	UXO Site #1
CTMKL-023-R-01	UXO Site #2
CTMKL-024-R-01	UXO Site #3
CTMKL-025-R-01	UXO Site #4

2005 IAP

Fort Bragg
Response Complete
Site Descriptions

LANDFILL 3

FTBR-003

SITE DESCRIPTION

FTBR-003 is a 66 acre site, in the southwest portion of the cantonment area, northwest of the intersection of Yadkin Road and Reilly Street. Results of investigation confirmed FTBR-003 to be an old landing strip, no landfill materials or contamination are present. The final RFI report was approved in July 1996.

NCDENR and U.S. EPA have determined that no further action is required.

STATUS

RRSE RATING: Not Evaluated

CONTAMINANT: None

MEDIA OF CONCERN: None

COMPLETED IRP PHASE:
PA/SI, RI

CURRENT IRP PHASE: RC

RC DATE: 199401

ABANDONED LANDFILL 7 (OU1)

FTBR-007

SITE DESCRIPTION

FTBR-007 is located southeast of the intersection of Longstreet Road and Ardennes Street in the western portion of the cantonment area. It is bounded on the north by the 82nd Airborne Division heating plant, on the west by Ardennes Street, and on the south by an intermittent stream that flows to Tank Creek. The 5.5 acre, unlined landfill was operated from 1955 to 1972. This landfill was used for the disposal of non-hazardous fly ash from the nearby coal-fired heating plant.

The RFI was completed in July 1994. NCDENR and U.S. EPA have determined that no further action is required.

STATUS

RRSE RATING: Low

CONTAMINANT: Metals

MEDIA OF CONCERN:
Groundwater, Soil

COMPLETED IRP PHASE:
PA/SI, RI

CURRENT IRP PHASE: RC

RC DATE: 199506

SANITARY LANDFILL 11 FTBR-011

SITE DESCRIPTION

FTBR-11 (SWMU11) was a landfill located on Longstreet Road immediately west of the cantonment area, approximately 1 mile west of Gruber Road and 1 mile south of McKellera Road. The landfill was used from 1975 to December 1997. It encompassed approximately 55 acres. The site employed the trench, fill and cover method and was constructed of a series of clay-lined trenched excavated to a depth of 16 to 20 ft bgs. Only one trench was open at a time.

The landfill was capped in 1999. NFA is required.

STATUS

RRSE RATING: Not Evaluated

CONTAMINANT: Unknown

MEDIA OF CONCERN: Unknown

COMPLETED IRP PHASE:
PA/SI

CURRENT IRP PHASE: RC

RC DATE: 199006

COOLYCONCH MT DEMO LANDFILL FTBR-013

SITE DESCRIPTION

FTBR-013 (SWMU-13) is an active landfill located on Lamont Road approximately one mile north of Longstreet Road. This unlined (~100 acre) landfill began operations in November 1986 as an area fill in a former clay borrow pit. Only construction and demolition debris are accepted at this facility. The site surface is covered with soil, but building materials and tires are exposed at the working face.

No further action is required by the IRP.

STATUS

RRSE RATING: Not Evaluated

CONTAMINANT: Unknown

MEDIA OF CONCERN:
Unknown

COMPLETED IRP PHASE:
PA/SI

CURRENT IRP PHASE: RC

RC DATE: 199006

ABANDONED LANDFILL 16 (OU6)

FTBR-016

SITE DESCRIPTION

At this time, this site is not ER,A eligible.

FTBR-16 is an abandoned, solid waste landfill located southwest of the intersection of Gruber Road and Murchison Road in the eastern portion of the cantonment area. Gullies along the western landfill boundary drain into Little Cross Creek. The years of operation are unknown.

Non-IRP funds are being used to investigate possible contamination.

STATUS

RRSE RATING: Not Evaluated

CONTAMINANT: VOCs, SVOCs, Metals, Petroleum Hydrocarbons, PCBs, Pesticides

MEDIA OF CONCERN: Soil, Surface Water, Groundwater

COMPLETED PHASE:
PA/SI

CURRENT PHASE: RC ER,A

RC DATE: 199703

82 DIV HEATING PLANT

FTBR-020

SITE DESCRIPTION

FTBR-020 (SWMU 20) includes 5 heating plants located in Buildings C-1432, 4-3124, 2-5411, D-3529 and N-6002. The 5 heating plants contain a total of 13 boilers, and have been in operation since 1981. The plants are operated under North Carolina Air Permit number 4379R6.

No further action is required under the IRP.

STATUS

RRSE RATING: Not Evaluated

CONTAMINANT: Unknown

MEDIA OF CONCERN:
Unknown

COMPLETED IRP PHASE:
PA/SI

CURRENT IRP PHASE: RC

RC DATE: 199006

18TH EOD DEMOLITION AREA FTBR-024

SITE DESCRIPTION

The 18th EOD Demolition Area (FTBR-024, SWMU 24) is the site of open burning and detonation of explosives and munitions. It is a 6-acre site located ~3,000 ft east of Preachers Road and 3,000 ft south of Longstreet Road at the north-west corner of the MacRidge Danger Area.

No further action is required under the IRP.

STATUS

RRSE RATING: Not Evaluated

CONTAMINANT: Unknown

MEDIA OF CONCERN: Unknown

COMPLETED IRP PHASE:
PA/SI

CURRENT IRP PHASE: RC

RC DATE: 199006

WTP ABANDONED LAGOON & DRYING BEDS FTBR-026

SITE DESCRIPTION

The water treatment plant (FTBR-026, SWMU 26) is located on Manchester Road, ~2,500 ft east of Rifle Range Road, within 200 ft of the Little River. Raw water from the Little River is treated at this plant. Treatment includes coagulation, flocculation, sedimentation, filtration, chlorination and fluoridation.

No further action is required under the IRP.

STATUS

RRSE RATING: Not Evaluated

CONTAMINANT: Unknown

MEDIA OF CONCERN:
Unknown

COMPLETED IRP PHASE:
PA/SI

CURRENT IRP PHASE: RC

RC DATE: 199006

LOADING/UNLOADING AREA (OU1) FTBR-030

SITE DESCRIPTION

This site is not eligible for IRP funds.

FTBR-030 was an inactive (used early 1970s - 1997) refill site located next to the 82nd Airborne Division heating plant, Building C-1432, in the western part of the cantonment area. The site is a 10-foot by 20-foot pad curbed on three sides. Used oil was pumped into three ASTs and into the heating plant boiler. Overfilling resulted in spills onto the soil and curbing. Project work was conducted with OMA funds. The facility was demolished in 1996.

A NFA letter was received in 1997.

STATUS

RRSE RATING: Not Evaluated

CONTAMINANT: Petroleum
Hydrocarbons

MEDIA OF CONCERN: Soil,
Groundwater

COMPLETED PHASE:
PA/SI

CURRENT PHASE: RC

RC DATE: 199703

ASH TANK SITE (OU1) FTBR-031

SITE DESCRIPTION

This site is not eligible for IRP funds.

FTBR-031 is located south of the intersection of Ardennes Street and Longstreet Road in the western portion of the cantonment area near FTBR-007. The aboveground tank was used to store coal ash from the heating plant from the early 1950s until the plant converted to oil in the early 1970s. Coal ash was observed on the ground next to the ash tank during the RFI, which has been completed. The facility was demolished in 1997.

In June 1996, NCDENR and U.S. EPA determined that no further action is required.

STATUS

RRSE RATING: Not Evaluated

CONTAMINANT: Metals

MEDIA OF CONCERN:
Soil, Groundwater

COMPLETED PHASE:
PA/SI, RI

CURRENT PHASE: RC

RC DATE: 199606

USED OIL USTS (113) (OU8) FTBR-33

SITE DESCRIPTION

FTBR-33 consisted of 113 used oil underground storage tanks located throughout the cantonment area. The tanks were used for the collection of used oil generated in vehicle and engine maintenance areas. These tanks were installed in 1981 and 1983 and range in capacities from 300 to 5,500 gallons. They were constructed of steel, coated and wrapped, and had cathodic protection. Liquid wastes in these tanks included kerosene, diesel fuel, motor oil, and hydraulic fluid. The used oil collected from these tanks was burned in the 82nd Airborne Division heating plant. Typically, used oil was poured into these tanks through a covered port which contains a metal grate to filter large debris. All tanks were subject to leaks and accidental surface spills.

Currently, one tank remains in use, all others were removed.

Fifty-four of the 113 used oil underground tanks have been investigated with OMA funds and have been given NFA by NCDENR.

The removed used oil tanks are being addressed under the Fort Bragg UST program.

STATUS

RRSE RATING: Not Evaluated

CONTAMINANT: Petroleum
Hydrocarbons, Metals, VOCs, SVOCs

MEDIA OF CONCERN: Soil,
Groundwater

COMPLETED IRP PHASE:
PA/SI

CURRENT IRP PHASE: RC

RC DATE: 199903

OIL/WATER SEPARATORS (OU9)

FTBR-035

SITE DESCRIPTION

There are more than 100 Oil/Water Separators (OWS) located throughout the cantonment area of Fort Bragg. One abandoned OWS (former Bldg A-2058) is eligible for IRP funding. The other, active, OWS will use non-IRP funding.

The former Bldg A-2058 OWS has inground, fiberglass tanks (250 gallon) used for gravity separation of oil in water prior to discharge to the sanitary sewer system. Wastes were primarily wash water and grease from vehicle maintenance and wash areas. Detergents were tested and used in the OWS. The building dates back to the 1940s.

The separator was removed and confirmatory samples were taken in late 2000. NFA was approved for the oil/water separator on May 31, 2001; additional investigation is needed for the grease rack.

Additional samples were taken from the grease rack in FY02. No additional contamination was found.

STATUS

RRSE RATING: Low

CONTAMINANTS: Petroleum
Hydrocarbons, VOCs, SVOCs, Metals

MEDIA OF CONCERN: Soil

COMPLETED IRP PHASE: PA/SI,
IRA, RI/FS

CURRENT IRP PHASE: RC

RC DATE: 200310

WASHRACKS (OU10)

FTBR-036

SITE DESCRIPTION

There are 74 washracks located throughout the cantonment area. All of the washracks drain to the oil/water separators where the oil is removed. The water is then drained to the sanitary sewer system. All of the washracks are active and, therefore, not eligible for IRP funds.

These washracks are used for washing military vehicles. Steam and cold water hoses supplemented with cleaning agents were used at the washracks. Cleaning agents are no longer used. The cleaning agent 1,1,1-trichloroethane reportedly was used at some washracks. The rinsate at the washracks contains some oil and grease from vehicles.

No further action is required under the IRP.

STATUS

RRSE RATING: Low

CONTAMINANT: Petroleum
Hydrocarbons, Metals, VOCs, SVOCs

MEDIA OF CONCERN: Soil,
Groundwater

COMPLETED IRP PHASE:
PA/SI

CURRENT IRP PHASE: RC

RC DATE: 200005

GRIT CHAMBER (OU7)

FTBR-038

SITE DESCRIPTION

This site is being handled as a compliance issue and, therefore, not eligible for ER,A funding.

FTBR-38 is part of the WWTP which is located on Manchester Road, north of Pope Air Force Base (PAFB). The grit chamber has been in operation since 1941. Influent wastewater from various areas of Fort Bragg enters the grit chamber where the velocity is decreased so large particles can be removed from the wastewater stream. Over the years, the WWTP has received and treated wastewater from laundry operations, washracks, oil/water separators, battery neutralization tanks, cooling tower basins, swimming pool filter back wash tanks, Womack Hospital Laboratories, and photographic laboratories. The incoming wastewater has contained oils and heavy metals.

A RFI may be required with OMA funds.

STATUS

RRSE RATING: Not Evaluated

CONTAMINANT: Petroleum
Hydrocarbons, Metals

MEDIA OF CONCERN: Soil,
Groundwater

COMPLETED PHASE:
PA/SI

CURRENT PHASE: RC

RC DATE: 199703

PRIMARY SEDIMENTATION TANKS (OU7)

FTBR-039

SITE DESCRIPTION

This site is being handled as a compliance issue and, therefore, not eligible for ER, A funding.

FTBR-039 is also part of the WWTP. The three primary sedimentation tanks were installed in 1941 and renovated in 1979. Wastewater from the grit chamber is directed to the primary sedimentation tanks. The tanks are designed to remove 90 to 95 percent of the suspended solids.

A RFI may be required with OMA funds.

STATUS

RRSE RATING: Not Evaluated

CONTAMINANT: Petroleum
Hydrocarbons

MEDIA OF CONCERN: Soil,
Groundwater

COMPLETED PHASE:
PA/SI

CURRENT PHASE: RC

RC DATE: 199703

BIOFILTERS (OU7)

FTBR-040

SITE DESCRIPTION

This site is being handled as a compliance issue and, therefore, not eligible for ER, A funding.

FTBR-040 is part of the WWTP which was activated in 1941. Wastewater flows from the primary sedimentation tanks to the two biofilters (also called trickling filters). The biofilters are open to the atmosphere and contain rocks. The purpose of the biofilters is to maintain an environment supporting the growth of microorganisms which deplete the amount of organic in the wastewater.

A RFI may be required with OMA funds.

STATUS

RRSE RATING: Not Evaluated

CONTAMINANT: Petroleum
Hydrocarbons, Metals

MEDIA OF CONCERN: Soil,
Groundwater

COMPLETED PHASE:
PA/SI

CURRENT PHASE: RC

RC DATE: 199703

SECONDARY SEDIMENTATION TANKS (OU7)

FTBR-042

SITE DESCRIPTION

This site is being handled as a compliance issue and, therefore, not eligible for ER, A funding.

FTBR-042 is another part of the WWTP that was installed in 1941. Wastewater leaving the biofilters is directed to one of four secondary sedimentation tanks (also called polishing ponds). These tanks add dissolved oxygen and also remove fine solids.

STATUS

RRSE RATING: Not Evaluated

CONTAMINANT: Petroleum
Hydrocarbons, Metals

MEDIA OF CONCERN: Soil,
Groundwater

COMPLETED PHASE:
PA/SI

CURRENT PHASE: RC

RC DATE: 199703

CHLORINATION FLASH MIX TANK (OU7)

FTBR-043

SITE DESCRIPTION

This site is being handled as a compliance issue and, therefore, not eligible for ER, A funding.

FTBR-043 is part of the WWTP and was installed in 1941. Wastewater flows from the secondary sedimentation tanks to the chlorine flash mix tank. Chlorine is injected to disinfect the water and mixed by a paddle in the middle.

A RFI may be required with OMA funds. At this time, this site is not eligible for ER, A funding.

STATUS

RRSE RATING: Not Evaluated

CONTAMINANT: Petroleum
Hydrocarbons, Metals

MEDIA OF CONCERN: Soil,
Groundwater

COMPLETED PHASE:
PA/SI

CURRENT PHASE: RC

RC DATE: 199703

CHLORINATION CONTACT TANK (OU7)

FTBR-044

SITE DESCRIPTION

This site is active and is being handled as a compliance issue and, therefore, not eligible for ER, A funding.

FTBR-044 is located at the WWTP. This tank was installed in 1979. After leaving the chlorination flash mix tank, wastewater enters the chlorination contact tank, where the velocity of the water is decreased to give the chlorine sufficient time to react with the water, before being discharged from the plant.

A RFI may be required with OMA funds.

STATUS

RRSE RATING: Not Evaluated

CONTAMINANT: Petroleum
Hydrocarbons, Metals

MEDIA OF CONCERN: Soil,
Groundwater

COMPLETED PHASE:
PA/SI

CURRENT PHASE: RC

RC DATE: 199703

RECIRCULATION TANK (OU7)

FTBR-045

SITE DESCRIPTION

This site is being handled as a compliance issue and, therefore, not eligible for ER, A funding.

FTBR-045 is part of the WWTP and was installed in 1955.

A RFI may be required with OMA funds. At this time, this site is not eligible for ER, A funding.

STATUS

RRSE RATING: Not Evaluated

CONTAMINANT: Petroleum
Hydrocarbons, Metals

MEDIA OF CONCERN: Soil,
Groundwater

COMPLETED PHASE:
PA/SI

CURRENT PHASE: RC

RC DATE: 199703

STEPPED CASCADE (OU7)

FTBR-046

SITE DESCRIPTION

This site is being handled as a compliance issue and, therefore, not eligible for ER, A funding.

FTBR-046 is located at the WWTP, and was installed in 1979. Water from the chlorination contact tank is directed to the stepped cascade prior to being discharged to the Lower Little River. The purpose of the stepped cascade is to aerate the water before it is discharged.

A RFI may be required with OMA funds. At this time, this site is not eligible for ER, A funding.

STATUS

RRSE RATING: Not Evaluated

CONTAMINANT: Petroleum
Hydrocarbons, Metals

MEDIA OF CONCERN: Soil,
Groundwater

COMPLETED PHASE:
PA/SI

CURRENT PHASE: RC

RC DATE: 199703

WWTP SLUDGE DRYING BEDS (OU7)

FTBR-050

SITE DESCRIPTION

FTBR-050 is located at the WWTP. Ten of the beds were installed in 1941 and the remaining five in 1980. The beds were divided in half, yielding a total of 30 drying beds. These beds are 200 x 200 feet and were reactivated in August of 1999.

Sludge remains in the sludge drying beds for 2.5 to 5 months before being removed and use for landfarming.

This site is active and, therefore, not eligible for IRP funds.

STATUS

RRSE RATING: Not Evaluated

CONTAMINANT: Petroleum
Hydrocarbons, Metals

MEDIA OF CONCERN: Soil,
Groundwater

COMPLETED PHASE:
PA/SI

CURRENT PHASE: RC

RC DATE: 199401

782ND BATTERY SHOP NEUTRALIZATION TANK (OU5) FTBR-077

SITE DESCRIPTION

FTBR-077 is an active site located at Building C-6015, southwest of the intersection of Gruber Road and Tullidge Way in the western portion of the cantonment area. The unit originally consisted of an underground, 200-gallon, concrete sump with a metal grate cover. The startup date for this unit is unknown. The sump was refurbished in 1993.

Soil samples were collected in 1997 and analyzed for total metals. Results were compared to EPA Region III Risk Based Concentrations and found to be below action levels. NCDENR requested (May 2000) additional information on the battery storage at this site. The request was fulfilled in June 2000.

NCDENR approved NFA for this site on August 11, 2000.

STATUS

RRSE RATING: Low

CONTAMINANT: Metals

MEDIA OF CONCERN: Soil

COMPLETED IRP PHASE: PA/SI

CURRENT IRP PHASE: RC

RC DATE: 199703

659TH BATTERY NEUTRALIZATION TANK (OU6) FTBR-086

SITE DESCRIPTION

This site is not eligible for ER, A funding because of the years of use.

FTBR-086 is an inactive site located near the intersection of 4th and D Streets in the COSCOM portion of the cantonment area (Bldg F-3040). This site consisted of a 7-foot diameter, 8-foot long concrete sump originally lined with 1/4 inch plastic and covered with a metal grate. In 1986, an EPA inspection indicated that the concrete sump and liner had lost their integrity due to contact with the battery acid. The sump was refurbished in 1993.

A RFI is underway with OMA funds.

STATUS

RRSE RATING: Not Evaluated

CONTAMINANT: Metals

MEDIA OF CONCERN: Soil,
Groundwater

COMPLETED PHASE:
PA/SI

CURRENT PHASE: RC

RC DATE: 199703

659TH USED OIL PIT (OU6) FTBR-088

SITE DESCRIPTION

This site is active and, therefore, not eligible for ER, A funding.

FTBR-088 is an active site located at Building F-2534 near the intersection of 4th and D Streets in the COSCOM portion of the cantonment area. This site consists of a used oil pit for the collection of oily runoff from the 659th Vehicle Maintenance yard's asphalt curbed pad. The pit is approximately three feet in diameter with a concrete cover. It is unknown when the site was started. Waste managed, in this unit, includes runoff contaminated with used oil and spent antifreeze.

A RFI is underway with OMA funds.

STATUS

RRSE RATING: Not Evaluated

CONTAMINANT: Petroleum
Hydrocarbons, Metals

MEDIA OF CONCERN: Soil,
Groundwater

COMPLETED PHASE:
PA/SI

CURRENT PHASE: RC

RC DATE: 199703

VOCATIONAL TECHNICAL TRAINING AREA (OU2) FTBR-102

SITE DESCRIPTION

FTBR-102 is located on Varsity Road in the northeast corner of the cantonment area. This site was used as an auto mechanic training facility for over 30 years. Spent chlorinated solvents used to degrease engine blocks and other motor parts were disposed of in two sumps. The sumps occupied less than 1/4 acre of the 6-acre site.

The RFI identified several chemicals of concern including volatile and semi-volatile organic compounds, metals, and petroleum hydrocarbons in the soil and groundwater. Soil was removed as an IRA in July 1996. The sumps and contaminated soil were removed prior to the construction of an elementary school in 1997.

CMS was started in FY97. Additional samples were taken in late FY01, no contamination was found above action levels.

The CMS recommending NFA was approved in Sept 2001.

STATUS

RRSE RATING: High

CONTAMINANT: Solvents, Pesti-
cides, Metals, Petroleum Hydrocarbons

MEDIA OF CONCERN: Soil,
Groundwater

COMPLETED IRP PHASE:
PA/SI, RI/FS, IRA (Soil)

CURRENT IRP PHASE: RC

RC DATE: 200112

WTP FUEL TANK SPILL (AOC A, OU7) FTBR-A

SITE DESCRIPTION

This site is active and, therefore, not eligible for IRP funds.

FTBR-A is a water treatment plant, fuel storage, tank spill located behind building V-3308. The spill is from an 8-foot diameter, above ground metal tank containing kerosene. The spill is located on the intake end of the tank and appears to be a result of overfilling rather than a leak.

A RFI is required using OMA funds.

STATUS

RRSE RATING: Not Evaluated

CONTAMINANT: Petroleum
Hydrocarbons

MEDIA OF CONCERN: Soil

COMPLETED PHASE:
PA/SI

CURRENT PHASE: RC

RC DATE: 199703

CLASSIFIED PAPER FUEL TANK SPILL (AOC B, OU1) FTBR-B

SITE DESCRIPTION

FTBR-B was a spill site at the former, classified paper incinerator (Bldg C-1629), fuel oil tank. The incinerator was converted to a natural gas system and the tank was removed in November 1993. This site is located near FTBR-007, about 250 feet south of the heating plant in the western portion of the cantonment area. The stain was approximately five feet in diameter on unprotected ground and appeared to be the result of overfilling rather than from a leak.

NCDENR and U.S. EPA determined that no further action is required.

STATUS

RRSE RATING: Not Evaluated

CONTAMINANT: Petroleum
Hydrocarbons

MEDIA OF CONCERN: Soil

COMPLETED IRP PHASE:
PA/SI, RI

CURRENT IRP PHASE: RC

RC DATE: 199609

BLDG P-3262 FUEL SPILL (AOC C, OU6) FTBR-C

SITE DESCRIPTION

This site is not eligible for IRP funds because of the years of use.

FTBR-C is a fuel spill site located at Simmons Army Air Field (SAAF) on the east side of the cantonment area. A fuel spill approximately three feet in diameter, at the inlet pipe to the underground fuel tank, located behind building P-3262. Vegetation is absent in the fuel spill area. This spill is located adjacent to a curbed roadway which drains into the storm sewer. This spill appears to be the result of poor fuel transfer practices.

The UST and soil were removed in 1998 under the UST Program.

This site was given NFA on 9/17/03 by NCDENR.

STATUS

RRSE RATING: Not Evaluated

CONTAMINANT: Petroleum
Hydrocarbons

MEDIA OF CONCERN: Soil

COMPLETED PHASE:
PA/SI

CURRENT PHASE: RC

RC DATE: 199703

BLDG M-7951, FUEL SPILL (AOC D, OU6) FTBR-D

SITE DESCRIPTION

This site is not eligible for IRP funds because of the years of use.

FTBR-D is an oil-stained area located at a UST on the south side of Building M-7951 near the intersection of Second and G Streets in the COSCOM portion of the cantonment area. During the RFA, two oil-stained areas were observed on the surface. Each of the stained areas is approximately three feet in diameter. One of these stains is near the UST inlet pipe. Both stains are believed to be the result of poor fuel transfer practices. A four-inch high berm with dimensions of five feet by ten feet surrounds this site as a spill control device.

The UST was removed in 1997 under the UST Program.

This site was given NFA on 9/17/03 by NCDENR.

STATUS

RRSE RATING: Not Evaluated

CONTAMINANT: Petroleum
Hydrocarbons

MEDIA OF CONCERN: Soil

COMPLETED PHASE:
PA/SI

CURRENT PHASE: RC

RC DATE: 199703

BLDG. 8-4606, FUEL SPILL (AOC E, OU4) FTBR-E

SITE DESCRIPTION

FTBR-E was reported in the Fort Bragg RFA as an area of stained soil adjacent to an underground fuel tank located behind (to the south of) Building 8-4608 and near the intersection of Woodruff and Knox Streets. This fuel stain was reported to be about eight feet by five feet and appeared to be the result of poor fuel transfer practices. The heating fuel UST had a 500-gallon capacity. Petroleum hydrocarbons were identified in the soil. The UST and contaminated soil were removed in April 1995 under the UST Program.

A UST Closure Report was submitted (1998) to the Division of Water Quality for approval. No further action is required under the IRP.

STATUS

RRSE RATING: Not Evaluated

CONTAMINANT: Petroleum Hydrocarbons

MEDIA OF CONCERN: Soil

COMPLETED IRP PHASE: PA/SI

CURRENT IRP PHASE: RC

RC DATE: 199703

VET CLINIC INCIN. UST SPILL (AOC F, OU4) FTBR-F

SITE DESCRIPTION

FTBR-F is a fuel oil stain approximately four feet in diameter found surrounding the inlet pipe to the underground fuel tank near the Veterinary Clinic Incinerator (Bldg 2-7402). This site is located northeast of the intersection of Butner Road and Reilly Street near the Pope Air Force Base (PAFB) main gate. The staining appears to be the result of poor fuel transfer practices. Semi-volatile organic and petroleum hydrocarbons were identified in the soil. The fuel oil UST and contaminated soil were removed in June 1997 under the UST Program.

A UST Closure Report was submitted (1998) to the Division of Water Quality for approval.

STATUS

RRSE RATING: Not Evaluated

CONTAMINANT: Petroleum Hydrocarbons

MEDIA OF CONCERN: Soil

COMPLETED IRP PHASE: PA/SI

CURRENT IRP PHASE: RC

RC DATE: 199703

LEE FIELDHOUSE UST SPILL (AOC G, OU4)

FTBR-G

SITE DESCRIPTION

FTBR-G is a fuel stain approximately three feet by seven feet at the inlet pipe of an inactive, heating oil UST on the north side of the Lee Field House (Bldg 3-1602). The field house is located near the intersection of Longstreet Road and Reilly Street. The stain appears to be the result of poor fuel transfer practices.

A UST Closure Report was submitted (1998) to the Division of Water Quality for approval.

STATUS

RRSE RATING: Not Evaluated

CONTAMINANT: Petroleum
Hydrocarbons

MEDIA OF CONCERN: Soil

COMPLETED IRP PHASE:
PA/SI

CURRENT IRP PHASE: RC

RC DATE: 199703

PAST MILESTONES

IRP Assessment Initiation	July 1982
FTBR-Evaluation	December 1986
RFA, Installation	July 1988
SI of SWMUs 4, 8, and 18	May 1990
PA/SI	January 1992
RFI of SWMUs 63, 69, AOCs E, F, G Initiated	July 1995
RFI of SWMUs 12, 102	April 1996
IRA of SWMU 102	May 1996
RFI of SWMUs 16, 86, 88, AOCs C, D Initiated	July 1996
RFI of SWMUs 3, 5	August 1996
RFI of SWMUs 2, 14, 8, 9	December 1996
FS/RD of SWMUs 12, 102 Initiated	September 1997
FS/RD of SWMUs 2, 8, 9, 14 Initiated	September 1998
RFI of SWMUs 7, 30, 31, AOC B	January 1999
IRA of SWMU 63 Initiated	July 1999
RFI of SWMUs 1, 77	August 1999
RFI at FTBR-103 Initiated	February 2000

Schedule

NO FURTHER ACTION SITES

FTBR-003 Landfill 3
FTBR-007 Abandoned Landfill 7 (OU 1)
FTBR-011 Sanitary Landfill 11
FTBR-013 Coolyconch Mt Demo Landfill
FTBR-016 Abandoned Landfill 16 (OU 6)
FTBR-020 82 Div Heating Plant
FTBR-024 18th EOD Demo Area
FTBR-026 WTP Abandoned Lagoon & Drying Beds
FTBR-030 Loading/Unloading Area (OU 1)
FTBR-031 Ash Tank Site (OU 1)
FTBR-33 Used Oil USTs (113) (OU 8)
FTBR-035 Oil/Water Separators (OU 9 - SWMU 35)
FTBR-036 Washracks (OU 10)
FTBR-038 Grit Chamber (OU 7)
FTBR-039 Primary Sedimentation Tanks (OU 7)
FTBR-040 Biofilters (OU 7)
FTBR-042 Secondary Sedimentation Tanks (OU 7)
FTBR-043 Chlorination Flash Mix Tank (OU 7)
FTBR-044 Chlorination Contact Tank (OU 7)
FTBR-045 Recirculation Tank (OU 7)
FTBR-046 Stepped Cascade (OU 7)
FTBR-050 WWTP Sludge Drying Beds (OU 7)
FTBR-077 782d Battery Shop Neutralization Tank (OU 5)
FTBR-086 659th Battery Neutralization Tank (OU 6)
FTBR-088 659th Used Oil Pit (OU 6)
FTBR-102 Vocational Technical Training Area (OU 2)
FTBR-A WTP Fuel Tank Spill (AOC A, OU 7)
FTBR-B Classified Paper Fuel Tank Spill (AOC B, OU 1)
FTBR-C Bldg P-3262, Fuel Spill (AOC C, OU 6)
FTBR-D Bldg. M-7951, Fuel Spill (AOC D, OU 6)
FTBR-E Bldg. 8-4606, Fuel Spill (AOC E, OU 4)
FTBR-F Vet Clinic Incin. UST Spill (AOC F, OU 4)
FTBR-G Lee Fieldhouse UST Spill (AOC G, OU 4)

Fort Bragg Installation Action Plan Schedule Chart

(Based on current funding constraints)

CURRENT PHASE

FUTURE PHASE

AEDB-R#	Site Name	RRSE	Phase	FY05	FY06	FY07	FY08	FY09	FY10	FY11+
FTBR-001	Abandoned Landfill 1	High	LTM							
FTBR-004	Landfill 4 and Fire Pits 18	High	LTM							
FTBR-005	Abandoned Landfill 5	High	LTM							
FTBR-008	Abandoned Landfill 9	High	LTM							
FTBR-009	Abandoned Landfill 9	High	LTM							
FTBR-012	Abandoned Landfill 12	High	LTM							
FTBR-014	Abandoned Landfills 2 & 14	High	RA							
			LTM							
FTBR-063	DEH Storage Compound	High	LTM							
FTBR-069	Jeep Dismantling Area, Bldg 8-3612	High	RI/FS							
			LTM							
FTBR-103	Mallonee Village Gas Station	High	CMS/RD							
			RA							
			LTM							
FTBR-104	Abandoned ASP	High	RI/FS							
			RA(C)							
			LTM							

Remediation Activities

COMPLETED REM/IRA/RA:

- FTBR-102, VTTA Sumps, Interim Remedial Action, removal of contaminated soil from two sumps. May 96 (FY96), \$126,000
- Removal of contaminated soil at FTBR-063 (Total Construction Cost \$985,280)
- IRA at FTBR-035
- FTBR-012 (fencing and signs)

CURRENT REM/IRA/RA:

- OU 3, SWMUs 8, 9, and 14

FUTURE REM/IRA/RA:

- Remedial Action at FTBR-103

Community Involvement

RESTORATION ADVISORY BOARD (RAB) STATUS

A public involvement survey was conducted in May 2003 and the community of Fort Bragg has shown no interest in forming a RAB.